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Proposed Maximum Residue Limit PMRL2014-30

Bifenazate

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that the addition of new uses on Crop Group 8-09 (Fruiting Vegetables) to the product label of Acramite® 50WS, containing technical grade bifenazate, is acceptable. The specific uses approved in Canada are detailed on the label of Acramite® 50WS, Pest Control Products Act Registration Number 27925.

The evaluation of this bifenazate application indicated that the end-use product has merit and value and the human health and environmental risks associated with the new uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally established as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

The proposed MRLs, to replace or be added to the MRLs already established for bifenazate, are as follows.

Table 1 Proposed Maximum Residue Limits for Bifenazate

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
bifenazate	1-methylethyl 2-(4-methoxy[1,1'-biphenyl]-3-yl)hydrazinecarboxylate, including the metabolite diazenecarboxylic acid, 2-(4-methoxy-[1,1'-biphenyl]-3-yl), 1-methylethyl ester	4.0[2]	Crop Group 8-09 (Fruiting vegetables)

1 ppm = parts per million

2 Proposed to replace the established MRL of 0.35 ppm for residues of bifenazate in/on tomatoes (EMRL2008-02) and the established MRL of 1.1 ppm for residues of bifenazate in/on bell peppers (EMRL2008-02), African eggplants, eggplants, pea eggplants and Scarlet eggplants (PMRL2013-95).

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International Situation and Trade Implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the field crop trials used to generate residue chemistry data.

Table 2 compares the MRLs proposed for bifenazate in Canada with the corresponding American tolerances and Codex MRLs.[1] American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food website, by pesticide or commodity.

Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs (where different)

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Crop Group 8-09 (Fruiting vegetables)	4.0	2.0 (Vegetable, fruiting, group 8)	3 (peppers chili) 2 (peppers, sweet (including pimento or pimiento) 0.5 (tomato)

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for bifenazate up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Appendix I

Summary of Field Trial Data Used to Support the Proposed MRLs

Residue data from field trials conducted in Canada and the United States were submitted to support the domestic use of Acramite® 50WS on Crop Group 8-09. Tomatoes and peppers were treated with bifenazate at exaggerated rates, and harvested according to the proposed label directions. In addition, a processing study in treated tomatoes was reviewed to determine the potential for concentration of residues of bifenazate in processed commodities.

Maximum Residue Limit(s)

The recommendation for the maximum residue limits (MRLs) for bifenazate was based upon the submitted field trial data, and the use of the OECD MRL Calculator as the statistical methodology. Table A1 summarizes the residue data used to calculate the proposed MRLs for Crop Group 8-09. Residues of bifenazate and the metabolite C3598 in processed commodities are covered under the established MRL for the raw agricultural commodity (RAC).

Table A1 Summary of Field Trial Used to Support Maximum Residue Limit(s) (MRLs)

Commodity	Application Method/ Total Application Rate (g a.i./ha)	Preharvest Interval (days)	Residues (ppm)	
			Min	Max
Tomato	Foliar application/ 516-583	2-3	0.010	0.354
Bell pepper	Foliar application/ 538-605	2-3	0.091	1.33
Non-bell pepper	Foliar application/ 538-554	2-3	0.508	1.59

Following the review of all available data, an MRL of 4.0 ppm is recommended to cover residues of bifenazate in or on crops in Crop Group 8-09. Residues of bifenazate in these commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.